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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,495	07/19/2005	Yoshiaki Yamamoto	1417-508	1626
23117 7590 08/31/2010 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
OLADAPO, TAIWO				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
08/31/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,495

Applicant(s)

YAMAMOTO, YOSHIKI

Examiner

TAIWO OLADAPO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment dated 06/14/2010 overcomes all rejections over Chiddick, in view of Ikejima, Reidmeyer and Okinawa which are hereby withdrawn. New rejections are made in view of amendment, below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitrovich (US 6,649,573) in view of Kurahashi et al. (US 5,437,802) and further in view of Urata et al. (US 6,509,099)

5. In regards to claim 1, Mitrovich teaches a solid lubricant and composition (title). The solid lubricant is useful for lubricating flanges of locomotive wheels, railcar etc. (abstract).

Mitrovich teaches the solid lubricant comprises two portions: a portion comprises 25 to 75% polymeric carrier such as polyethylene or synthetic wax etc., 5 to 75% of inorganic/organic lubricant powder, the second portion comprises 25 to 75% polymeric carrier such as polyethylene, and 5 to 75% of inorganic/organic lubricant powder (column 2 lines 49 – column 3 line 9; claim 1). Thus, providing for a composition that can comprise of 12.5 to 75% of polyethylene, 12.5 to 37.5% synthetic wax, and 2.5 to 75% inorganic/organic lubricant powder.

Mitrovich teaches the inorganic and organic lubricant powders are antiwear additives which preferably comprises molybdenum disulfide, graphite, talc, mica etc, (column 5 lines 58 – 67), but does not particularly recite the presence of melamine cyanurate. Mitrovich does not recite that the synthetic wax is hydrocarbon based wax.

Urata is added to teach solid lubricants which are used to provide lubricating film on a metal surface, including polyethylene wax, synthetic paraffin wax, fatty acid amide, polytetrafluoroethylene resin (PTFE), metallic soap etc. (column 8 lines 27 – 45). The synthetic waxes such as polyethylene wax and synthetic paraffin waxes of Urata are suitable synthetic wax for use in the solid lubricant of Mitrovich.

Kurahashi is added to teach solid lubricants similar to Mitrovich (column 4 lines 39 – 40). Kurahashi teaches inorganic lubricants include graphite, molybdenum disulfide, mica, talc etc., and organic lubricants include polytetrafluoroethylene (ptfe), melamine cyanurate (MCA) etc. (column 4 lines 41 – 47).

It would therefore have been obvious for one of ordinary skill in the art at the time of the invention to have used melamine cyanurate according to the teaching of Kurahashi as organic

solid lubricant in the invention Mitrovich, as Kurahashi teaches they are suitable as organic solid lubricants.

Mitrovich, in view of Urata and Kurahashi combined teach solid lubricants which can comprise the claimed ingredients in overlapping ranges therefore the product would have similar coefficient of friction as the claim. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

6. In regards to claim 2, Mitrovich, Urata and Kurahashi combined teach the solid lubricant wherein the wax comprises polyethylene wax or paraffin waxes as previously stated.

7. In regards to claim 3, Mitrovich, Urata and Kurahashi combined teach the solid lubricant which can comprise solid lubricants in overlapping ranges. Urata teaches solid lubricants can comprise fatty acid amides such as amides of stearic, oleic and palmitic acids which are higher fatty amides [0481].

8. In regards to claims 4, 6, Mitrovich, Urata and Kurahashi combined teach the solid lubricant in overlapping ranges which can comprise ptfe and metallic soap as previously stated.

9. In regards to claim 5, Mitrovich, Urata and Kurahashi combined teach the solid lubricant. Urata teaches rust preventing additive such as phosphates can be mixed with solid lubricant in the lubricating composition and can be present at from 1 to 100 part by weight in organic resin (column 4 lines 22 – 43), which overlaps the claimed limitation.

10. In regards to claim 7, Mitrovich, Urata and Kurahashi combined teach solid lubricants. The lubricant of Mitrovich is used for lubricating flanges of wheels, rail wheels, rail tract etc.

(abstract) which are sliding surfaces. Mitrovich teaches applying the lubricant stick to rails (column 9 lines 50 – 59).

Response to Arguments

11. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.
12. The applicant has amended the claims to recite a solid lubricant having a friction coefficient of not more than 0.100, thus overcoming the reference of Chiddick and other combinations. The applicant argues that the combination of Levy and Kurahashi et al. teaches lubricants comprising PTFE not polyethylene according to the claims thus overcoming the rejections. However, a new reference by Mitrovich teaching similar solid lubricants to the claim having polyethylene, waxes and other solid lubricants is applied which would have similar coefficient of friction to the claimed invention. Therefore the arguments are moot.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Ellen M McAvoy/
Primary Examiner, Art Unit 1797